

Engineering Research Development Center Contingency Base Virtual Forward Operating Base R&D Program

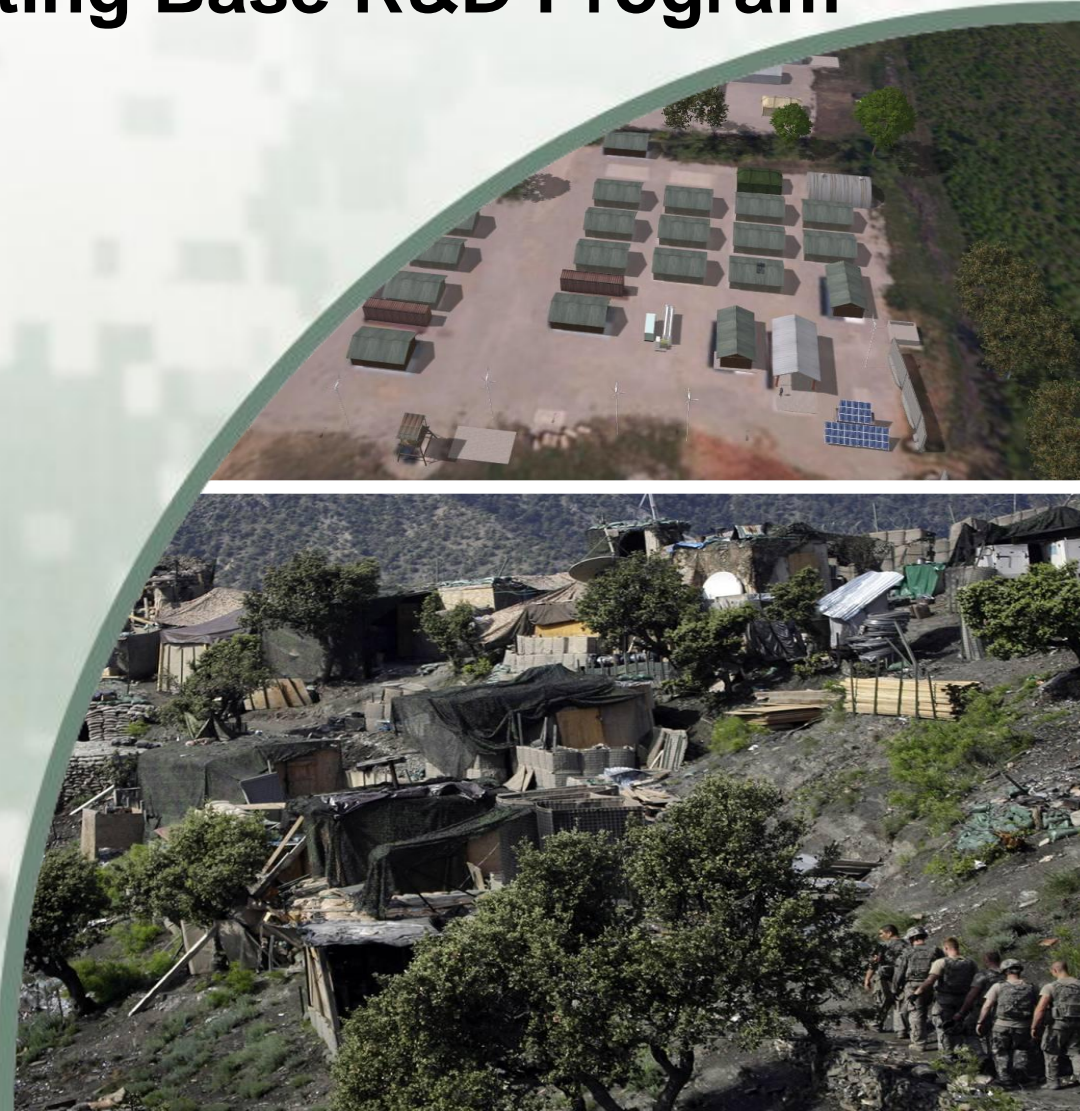
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**US Army Corps
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Agenda

- *Contingency Base Planning and Design Goals*
- *Virtual Forward Operating Base (VFOB™) Effort*
- *Summary*
- *Questions*



ERDC/CERL Contingency Basing Planning & Design Goals

- ***Reduce Resource Requirements***
- ***Understand Functional Systems and System Dynamics***
- ***Optimize Systems Designs***
- ***Improve Sustainability***
- ***Increase Modularity, Scalability, Adaptability, Reusability, Durability, and Reliability***
- ***Enhance Survivability***
- ***Improve Deployability***



Force Multiplier + Reduce Casualties + Combat Multiplier



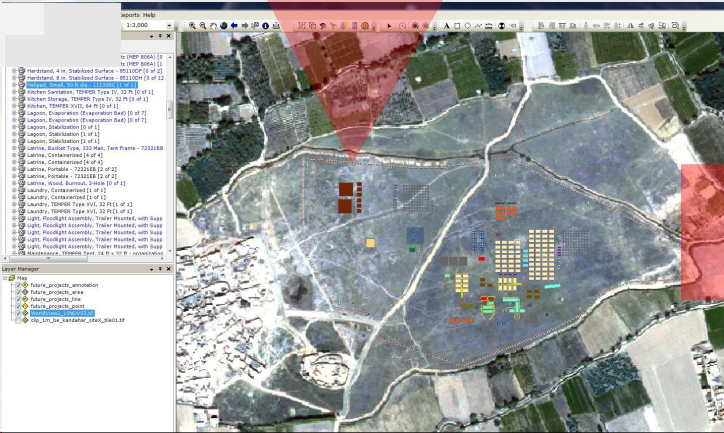
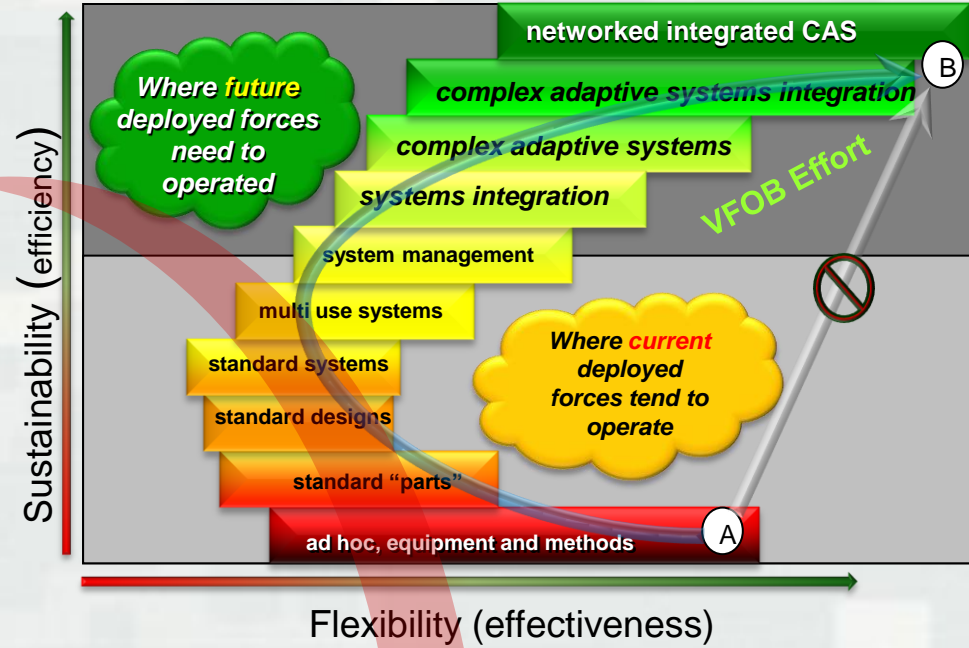
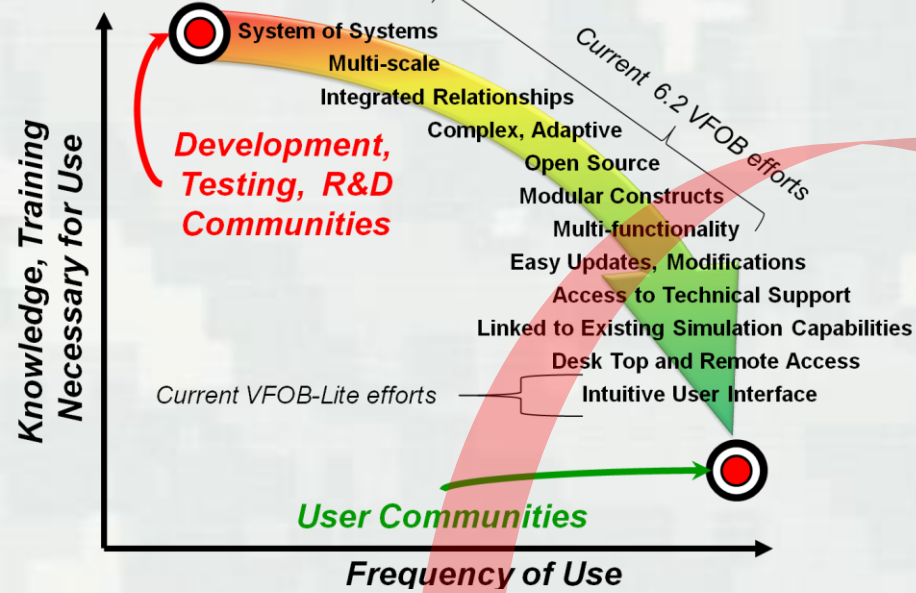
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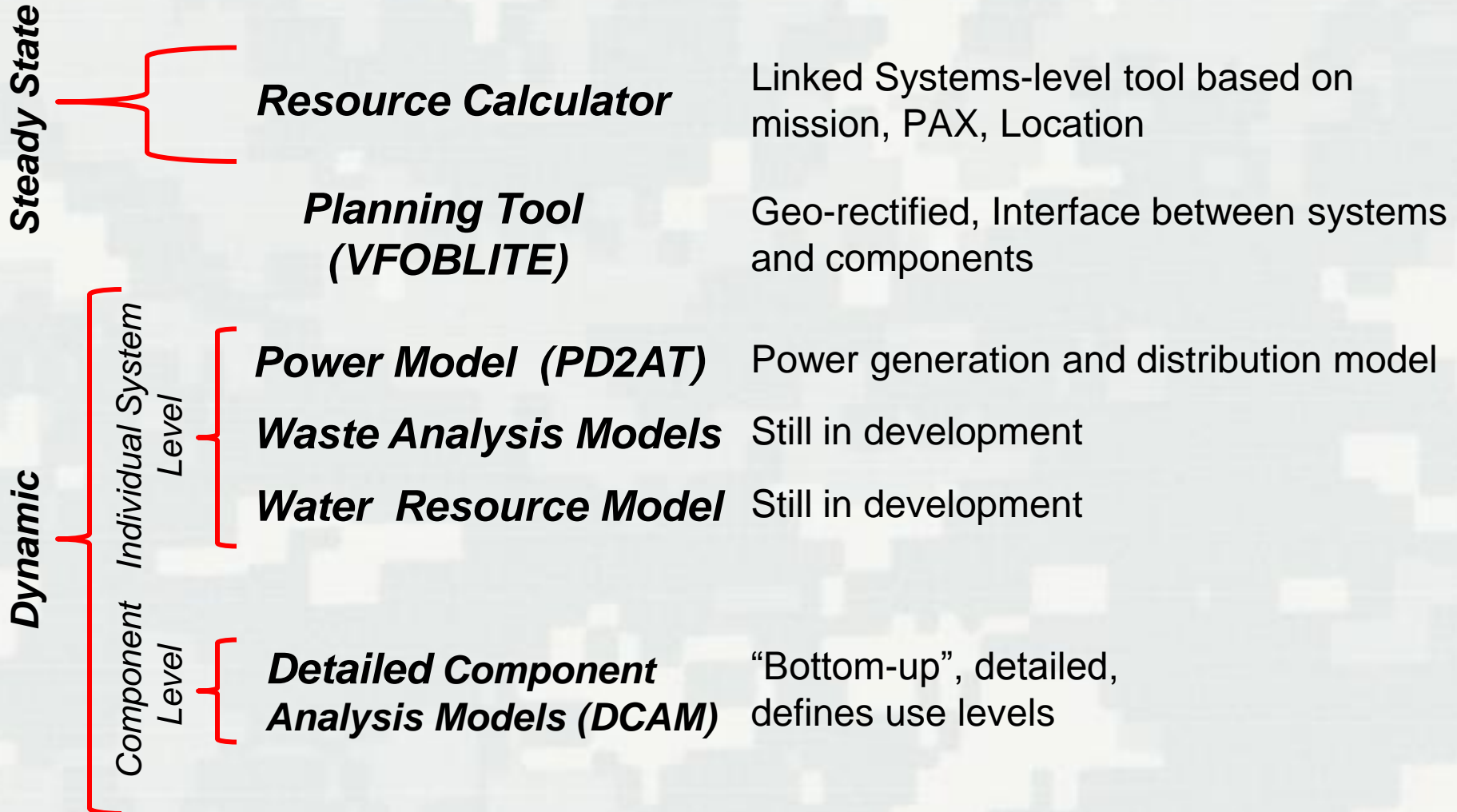
Virtual Forward Operating Bases (VFOB™)

VFOB Objective

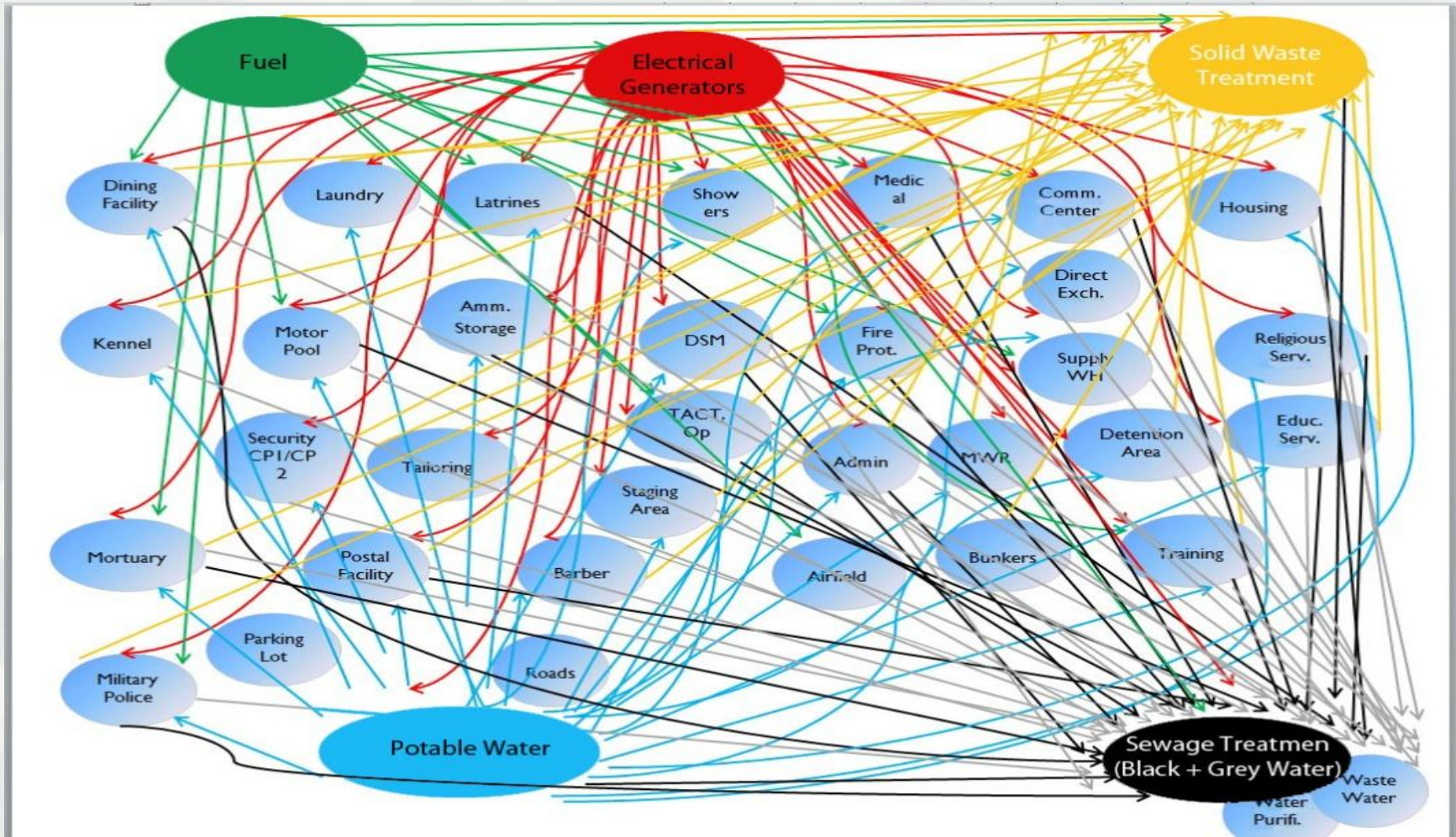


VFOB™ models Power, Water, Waste use for Contingency Bases

VFOB™ is a Multi-level Suite of Tools



VFOB™ Resource Calculator Flow Paths



Numerous Complex Interrelationships



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VFOB™ Layout and Information Tool Editor (VFOBLITE)



Drag and Drop Templates, Systems, Components

Summary

- ***ERDC /CERL is leading the way in developing methods and tools for planning and design for contingency bases***
 - ✓ Manage and operate **CBITEC** one of critical demonstration locations for TECD 4a for new capabilities
 - ✓ Co-Lead for TECD 4a Base Sustainment
 - ✓ NATO Net Zero Basing Lead for contingency base modeling.
- ***ERDC/CERL VFOB™ effort has begun spiraling out planning and tools***
 - ✓ Resource Calculator Tool
 - Undergoing first round **user test and evaluation**
 - **USMA evaluating as training tool**
 - ✓ PD2AT
 - Completed **proof of concept**
 - Creating user community defined use case scenarios
 - ✓ VFOBLITE
 - Established **geo-rectification of maps** and templates, systems sets, and components.
 - Linked with **Resource Calculator and PD2AT**
 - Developing systems library for object model that is capable of **linking with AFCS/JCMS**
 - ✓ Developing dynamic systems time dependent use relationships
 - ✓ DCAM Library
 - Expanding and improving models for non-Force Provider base camps and new technologies
 - Will be used to **validate existing relationships**
 - Will be used to **evaluate effects of new technologies** on resource-use behavior
 - ✓ Developing Water and Waste models
 - ✓ Starting Dashboard Model Start FY14





Questions

25 Feb 20,000 BC... First Expeditionary Base Camp